

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/058893 A1

(51) International Patent Classification⁷: C07D 471/04, A61K 31/4184

(21) International Application Number:
PCT/EP2004/053544

(22) International Filing Date:
16 December 2004 (16.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03028846.8 16 December 2003 (16.12.2003) EP

(71) Applicant (for all designated States except US): ALTANA PHARMA AG [DE/DE]; Byk-Gulden-Str. 2, 78467 Konstanz (DE).

(72) Inventors (for all designated States except CA, PH, US): ZIMMERMANN, Peter, Jan; Zum Lerchental 43/1, 78315 Radolfzell (DE). BREHM, Christof; Richentalstr. 8, 78462 Konstanz (DE). PALMER, Andreas; Pirminweg 1a, 78467 Konstanz (DE). CHIESA, M., Vittoria; Alpenstr. 5, 78464 Konstanz (DE). SIMON, Wolfgang-Alexander; Schubertstrasse 17, 78464 Konstanz (DE). POSTIUS, Stefan; Austrasse 4b, 78467 Konstanz (DE). KROMER, Wolfgang; Hinterhauserstr. 5, 78464 Konstanz (DE). SENN-BILFINGER, Joerg; Saentisstrasse 7, 78464 Konstanz (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): BUHR, Wilmo [DE/DE]; Zum Kirchenwald 20, D-78465 Konstanz (DE).

(74) Agents: WOLF, Ulrich et al.; c/o ALTANA Pharma AG, Byk-Gulden-Str. 2, 78467 Konstanz (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report

(48) Date of publication of this corrected version:

11 May 2006

(15) Information about Correction:

see PCT Gazette No. 19/2006 of 11 May 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRICYCLIC BENZIMIDAZOLES

(57) Abstract: The invention relates to 6,7,8,9-Tetrahydro-3H-imidazo[4,5-h]quinolines of formula 1, in which the substituents and symbols have the meanings indicated in the description. The compounds have gastric secretion inhibiting and excellent gastric and intestinal protective action properties.